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10/549,781	09/19/2005	Richard Walker Browne	CL2125USPCT	7124
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Wilmington, DE 19898				
EXAMINER				
CHEN, WENPENG				
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/549,781

Applicant(s)

BROWNE ET AL

Examiner

Wenpeng Chen

Art Unit

2624

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 19 September 2005 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-946)
- 3) ☒ Information Disclosure Statement(s) (PTO/CIS)
- 4) ☐ Interview Summary (PTO-413)
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: ____
- Paper No(s)/Mail Date 7/19/2007

Drawings

1. The drawings are objected to because the following reasons:

-- Fig. 8A shows "from Fig. 7 point A". However, there is no point A in Fig. 7.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

2. Claims 1-18 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for the following reasons.

- There are insufficient antecedent bases for the following limitations.

-- Claim 1 recites "the ratios" in line 13. It seems to the Examiner that the problem can be fixed by changing "ratio" in line 11 to "ratios".

-- Claim 2 recites "the illumination level" in line 19. It shall be changed to "the illumination output level".

-- Claim 2 recites "the dark-current-corrected frame-averaged image" in line 3 counted from the end of Claim 2.

-- Claim 13 recites "the predetermined sample plane" in line 17 and "the sphere" in line 18,

- Claim 1 recites the phrase "an illumination level the same as **that** .." in line 9. The level can be referred to "the initial illumination level" or "the adjusted illumination level" recited prior to the appearance of the word "**that**" in the phrase.

Allowable Subject Matter

3. Claims 1-18 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action.

The following is a statement of reasons for the indication of allowable subject matter.

a. For Claim 1, the prior fails to teach the method for measuring the degree to which **a printed image on a first side of a sheet is visible when illuminating and viewing a second side of the sheet**, the method specifically comprises the following features in combination with other recited limitations:

- illuminating the sheet which has **a printed image on a first side** at an illumination level the same as that used to create the calibration image and creating an image of the sheet;
- **measuring the ratios of the pixel intensities of the image of the sheet with the corresponding pixel intensities of the calibration image;**
- **calculating a mean value of the ratios** of the pixel intensities.

b. For Claim 2, the prior fails to teach the image analysis method specifically comprises the following features in combination with other recited limitations:

(b) uniformly illuminating, with a diffuse light source, the front surface of a reference object, said reference object having no image on its reverse, and creating a calibration image of the reference object, comprising the steps of:

-- (5) creating a frame-averaged reference image of the front surface of the reference object;

-- (6) *creating a dark-current corrected calibration image of the reference object by subtracting the frame-averaged dark current image of step (a) from the frame-averaged reference image of step (5) on a pixel by pixel basis* and storing the resulting image in the memory;

(c) *uniformly illuminating*, with the diffuse light source at the predetermined illumination level, *the front surface of a sample object having a printed image on the reverse surface;*

(e) *creating a dark-current-corrected image of the front surface of the sample object by subtracting the frame-averaged dark current image of step (a) from the frame-averaged image of step (d) on a pixel by pixel basis* and storing the resulting image in the memory;

(f) analyzing the dark-current-corrected frame-averaged image by *calculating the ratio of the image of step (e) with the image of step (b) (6) on a pixel by pixel basis to quantify showthrough.*

c. For Claim 13, the prior fails to teach the apparatus which specifically comprises the following features in combination with other recited limitations:

b) a computerized image processing assembly for controlling the illumination level of **the sample object, which has a printed image on its first side**, created by the illuminating assembly and for receiving images created by the imaging assembly and analyzing those images, wherein

-- the illuminating assembly comprises:

(i) **a hemispherical reflector** positioned adjacent the sample holder so that the predetermined **sample plane corresponds to the equatorial plane of the hemisphere**, the **hemisphere having a diffusely reflecting interior surface and a polar opening for mounting the imaging assembly**,

(ii) **a circular array of light sources** positioned above the equatorial plane and arranged to illuminate the diffusely reflecting interior surface of the hemisphere;

(iii) **a photodetector positioned adjacent the array of light sources** and oriented to sense the level of light diffusely reflected from the interior surface of the hemisphere;

-- the imaging assembly comprising:

(ii) a photodetector array, the photodetector array being connected to the computerized image processing assembly and other components as recited. .

Conclusion

4. The prior art made of record in form PTO-892 and not relied upon is considered pertinent to applicant's disclosure.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Wenpeng Chen whose telephone number is 571-272-7431. The examiner can normally be reached on 8:30 am - 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bhavesh Mehta can be reached on 571-272-7453. The fax phone numbers for the organization where this application or proceeding is assigned are 571-273-8300 for regular communications and 571-273-8300 for After Final communications. TC 2600's customer service number is 571-272-2600.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 571-272-2600.

/Wenpeng Chen/
Primary Examiner, Art Unit 2624

February 6, 2009